

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [61 FR 50999 NO. 190 09/30/96]

[Docket No. 94-CE-22-AD; Amendment 39-9774; AD 96-20-08]

RIN 2120-AA64

Airworthiness Directives; Fairchild Aircraft SA26, SA226, and SA227 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes AD 93-19-06, which currently requires repetitively inspecting acrylic cabin and cockpit side windows for cracks on certain Fairchild Aircraft SA26, SA226, and SA227 series airplanes, and, if cracks are found that exceed certain limitations, replacing that window. This action maintains the requirement of repetitively inspecting the cabin and cockpit side windows, and adds a life limit for the single-pane cockpit side windows. Acrylic window failures on the affected airplanes prompted this action. The actions specified by this AD are intended to prevent acrylic cabin or cockpit side window failures, which could result in airframe damage and decompression injuries.

DATES: Effective November 14, 1996.

The incorporation by reference of certain publications listed in the regulations was previously approved by the Director of the Federal Register as of November 19, 1993 (58 FR 51771, October 5, 1993).

ADDRESSES: Service information that applies to this AD may be obtained from Fairchild Aircraft, P.O. Box 790490, San Antonio, Texas 78279-0490; telephone (210) 824-9421. This information may also be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 94-CE-22-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Hung Viet Nguyen, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone (817) 222-5155; facsimile (817) 222-5960.

SUPPLEMENTARY INFORMATION:

**Events Leading to This Action**

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Fairchild Aircraft SA26, SA226, and SA227 series airplanes was published in the **Federal Register** on April 26, 1996 (61 FR 18524). The action proposed to supersede AD 93-19-06 with a new AD that would maintain the requirement of repetitively inspecting the cabin and cockpit side windows, and would add a life limit for the single-pane cockpit side windows.

Accomplishment of the single-pane window installation as specified in the supplemental notice of proposed rulemaking (NPRM) would be in accordance with the applicable maintenance manual. The proposed inspections as specified in the supplemental NPRM would be accomplished in accordance with the following service bulletins (SB), as applicable:

Fairchild SB 26-56-20-042, Issued: November 28, 1988;  
Revised: February 7, 1991.

Fairchild SB 226-56-001, Issued: February 2, 1983;  
Revised: November 26, 1991.

Fairchild SB 227-56-001, Issued: February 2, 1983;  
Revised: November 26, 1991.

Fairchild SB 226-56-002, Issued: March 3, 1983;  
Revised: May 29, 1992.

Fairchild SB 227-56-002, Issued: January 5, 1984;  
Revised: May 29, 1992, and April 1, 1993.

Fairchild SB 226-56-003, Issued: September 13, 1984;  
Revised: November 2, 1989.

Fairchild SB 227-56-003, Issued: September 13, 1984;  
Revised: November 2, 1989.

Fairchild SB 26-56-10-038, Issued: October 8, 1984;  
Revised: February 7, 1991.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comment received.

#### **Disposition of the Comment**

The commenter supports the proposal as written, and would like the FAA to treat this as interim action until a new improved cockpit side window defogging system is developed. The FAA basically concurs. A new window design is now going through analysis and testing. Based on the results of this analysis and testing, the FAA will determine if additional improvements are needed to assure that an acceptable level of safety (to the actions specified in this AD) can be maintained. The FAA then may initiate additional rulemaking activity to require installation of the new design window. In the meantime, the FAA has determined that the actions required by this AD will maintain the required level of safety (as it relates to cabin and cockpit side windows) until the improved design windows are approved and available. No changes have been made to the AD as a result of this comment.

No comments were received regarding the FAA's determination of the cost impact on the public.

#### **The FAA's Determination**

After careful review of all available information related to the subject presented above, including the referenced service information, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for

minor editorial corrections. The FAA has determined that these minor corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

#### **Compliance Time Criteria**

The compliance time for this AD is presented in both hours time-in-service (TIS) and calendar time. The referenced acrylic cabin and cockpit side windows are affected whether the airplane is in flight or on the ground. In addition, the utilization rates of the affected airplanes vary among operators. For example, operators in unscheduled service utilize their airplanes an average of approximately 200 to 300 hours TIS annually, while those in commuter service (scheduled) utilize their airplanes an average of approximately 2,000 hours TIS annually. Based on this wide utilization rate variance and the fact that these windows are affected when the airplane is in flight and on the ground, the FAA has determined that the compliance time for this rule should be in hours TIS and calendar time.

#### **Cost Impact**

The FAA estimates that 633 airplanes in the U.S. registry will be affected by this AD, that it will take approximately 28 workhours per airplane (14 workhours per window) to accomplish the life limit installation and that the average labor rate is approximately \$60 an hour. Parts cost approximately \$2,200 per airplane (\$1,100 per window). Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be \$2,456,040. AD 93-19-06 currently requires the same inspections as this AD for all of the affected airplanes. Therefore, the cost impact of the required inspections (3 workhours X \$60 X 633 airplanes = \$113,940) for operators of all affected airplanes is the same as AD 93-19-06. The figure does not take into account the cost of repetitive inspections. The FAA has no way of determining how many repetitive inspections each owner/operator may incur over the life of the airplane.

In addition, Fairchild Aircraft has informed the FAA that approximately 250 of the 633 affected airplanes are equipped with cockpit side windows with inner window panes, and therefore are not subject to the single-pane window replacements (dual-pane windows will still be subject to repetitive inspections). With this in mind, the proposed cost impact upon U.S. operators would be reduced approximately \$970,000 from \$2,456,040 to \$1,486,040.

#### **Regulatory Impact**

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

**Section 39.13 - [AMENDED]**

2. Section 39.13 is amended by removing Airworthiness Directive (AD) 93-19-06, Amendment 39-8705 (58 FR 51771, October 5, 1993), and by adding a new AD to read as follows:

**96-20-08 FAIRCHILD AIRCRAFT:** Amendment 39-9774; Docket No. 94-CE-22-AD. Supersedes AD 93-19-06, Amendment 39-8705.

Applicability: Models SA26-T, SA26-AT, SA226-T, SA226-T(B), SA226-AT, SA226-TC, SA227-AT, SA227-AC, SA227-BC, and SA227-TT airplanes (all serial numbers for all models), certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

NOTE 2: The applicability of this AD takes precedence over that specified in the service information.

Compliance: Required as indicated in the body of the AD, unless already accomplished.

To prevent acrylic cabin or cockpit side window failures, which could result in airframe damage and decompression injuries, accomplish the following:

(a) Upon accumulating 5,000 hours time-in-service (TIS) or within the next 1,000 hours TIS after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 5,000 hours TIS, replace each single-pane cockpit side window with a new window of like design in accordance with the applicable maintenance manual.

(1) Accomplish the inspection specified in paragraph (b) of this AD between 10 to 20 hours TIS after replacing each window to ensure that no damage has occurred after installation; and

(2) If cracks are found, utilize the chart in paragraph (b) of this AD to determine the applicable action necessary.

(b) Visually inspect all acrylic single-pane cockpit side windows for cracks in accordance with the service information presented in paragraph (d)(2) of this AD, as applicable. Accomplish the initial inspection, and applicable reinspection or replacement as specified in the following chart:

Condition	Initial Action	Repetitive Action
<p><b>Upon the effectiveness of this AD.</b></p>	<p>Inspect at 150 hours TIS after the effective date of this AD.</p>	<p>Reinspect at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p>

<p><b>If cracks are found where the sum total of all cracks is less than 4.3 inches in combined length, but where a crack meets or exceeds .30 inches as specified in the Crack Limitations section of the service information referenced in paragraph (d)(2) of this AD.</b></p>	<p>Accomplish one of the following:</p> <p>1. Prior to further flight, replace the window with a new window of like design in accordance with the applicable maintenance manual.</p> <p style="text-align: center;">or</p> <p>-----</p> <p>2. Prior to further flight, fabricate a placard with the following words in letters at least 0.10-inch in height and install this placard within the pilot's clear view close to the pressurization controls: "AIRPLANE MUST BE OPERATED UNPRESSURIZED", and prior to further flight, insert a copy of this AD into the Limitations Section of the FAA-approved Airplane Flight Manual (AFM).</p>	<p>Accomplish the corresponding repetitive action:</p> <p>1. Reinspect initially between 10 and 20 hours TIS after replacing the window to ensure that no damage has occurred after installation, and thereafter at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p> <p style="text-align: center;">or</p> <p>-----</p> <p>2. Repeat the inspection specified in paragraph (b) of this AD at intervals not to exceed 25 hours TIS or 30 calendar days, whichever occurs first, provided the sum total of all cracks does not exceed 4.3 inches in combined length. Use the <b>"If cracks are found where the sum total of all cracks meets or exceeds 4.3 inches in combined length"</b> condition column for replacement and inspection times if the cracks found are at that level.</p>

<b>Condition</b>	<b>Initial Action</b>	<b>Repetitive Action</b>
<b>If cracks are found where the sum total of all cracks meets or exceeds 4.3 inches in combined length.</b>	Prior to further flight, replace the window with a new window of like design in accordance with the applicable maintenance manual.	Reinspect initially between 10 and 20 hours TIS after replacing the window to ensure that no damage has occurred after installation, and thereafter at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.
<b>With cracks found that are less than .30 inches (as specified in the applicable service information referenced in paragraph (d)(2) of this AD) provided the sum total of all cracks does not exceed 4.3 inches in combined length.</b>	Reinspect within 25 hours TIS or 30 calendar days, whichever occurs first.	Continue this reinspection at intervals not to exceed 25 hours TIS or 30 calendar days, whichever occurs first, provided no crack is found that is .30 inches or greater or the combined length of all cracks exceeds 4.3 inches in combined length. Use applicable condition column entry to determine compliance times if any of these crack limits are met.
<b>With no cracks found after one of the inspections required by this AD.</b>	Reinspect within 1,000 hours TIS and 12 calendar months after the last inspection, whichever occurs first.	Reinspect at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.

(c) Visually inspect all acrylic cabin and dual-pane cockpit side windows for cracks in accordance with the service information specified in paragraphs (d)(1) and (d)(2) of this AD. Accomplish the initial inspection and applicable reinspection or replacement as specified in the following chart:

Condition	Initial Action	Repetitive Action
<p><b>Upon the effectiveness of this AD.</b></p>	<p>Inspect at 150 hours TIS after the effective date of this AD, unless already accomplished within the last 1,000 hours TIS or 12 calendar months, which would put airplane in compliance with superseded AD 93-19-06. Use the results of the previous inspection under AD 93-19-06 to determine repetitive action.</p>	<p>Reinspect at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p> <p>For airplane owners/operators taking “unless already accomplished” credit for the initial inspection, use the results of the previous inspection under AD 93-19-06 to determine the repetitive action.</p>

Condition	Initial Action	Repetitive Action
<p><b>If cracks are found where the sum total of all cracks is less than 4.3 inches in combined length, but where a crack meets or exceeds .30 inches as specified in the Crack Limitations section of the service information referenced in paragraph (d)(2) of this AD.</b></p>	<p>Accomplish one of the following:</p> <p>1. Prior to further flight, replace the window with a new window of like design in accordance with the applicable maintenance manual.</p> <p style="text-align: center;">or</p> <p>-----</p> <p>2. Prior to further flight, fabricate a placard with the following words in letters at least 0.10-inch in height and install this placard within the pilot's clear view close to the pressurization controls: "AIRPLANE MUST BE OPERATED UNPRESSURIZED", and prior to further flight, insert a copy of this AD into the Limitations Section of the FAA-approved Airplane Flight Manual (AFM).</p>	<p>Accomplish the corresponding repetitive action:</p> <p>1. Reinspect initially between 10 and 20 hours TIS after replacing the window to ensure that no damage has occurred after installation, and thereafter at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p> <p style="text-align: center;">or</p> <p>-----</p> <p>2. Repeat the inspection specified in paragraph (b) of this AD at intervals not to exceed 25 hours TIS or 30 calendar days, whichever occurs first, provided the sum total of all cracks does not exceed 4.3 inches in combined length. Use the <b>"If cracks are found where the sum total of all cracks meets or exceeds 4.3 inches in combined length"</b> condition column for replacement and inspection times if the cracks found are at that level.</p>

Condition	Initial Action	Repetitive Action
<p><b>If cracks are found where the sum total of all cracks meets or exceeds 4.3 inches in combined length.</b></p>	<p>Prior to further flight, replace the window with a new window of like design in accordance with the applicable maintenance manual.</p>	<p>Reinspect initially between 10 and 20 hours TIS after replacing the window to ensure that no damage has occurred after installation, and thereafter at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p>
<p><b>With cracks found that are less than .30 inches (as specified in the applicable service information referenced in paragraph (d)(2) of this AD) provided the sum total of all cracks does not exceed 4.3 inches in combined length.</b></p>	<p>Reinspect within 25 hours TIS or 30 calendar days, whichever occurs first.</p>	<p>Continue this reinspection at intervals not to exceed 25 hours TIS or 30 calendar days, whichever occurs first, provided no crack is found that is .30 inches or greater or the combined length of all cracks exceeds 4.3 inches in combined length. Use applicable condition column entry to determine compliance times if any of these crack limits are met.</p>
<p><b>With no cracks found after one of the inspections required by this AD.</b></p>	<p>Reinspect within 1,000 hours TIS and 12 calendar months after the last inspection, whichever occurs first.</p>	<p>Reinspect at intervals not to exceed 1,000 hours TIS or 12 calendar months, whichever occurs first, provided no cracks are found. Use applicable condition column entry to determine compliance times if cracks are found.</p>

(d) The following specifies the service bulletins that contain the procedures to accomplish the required inspections:

(1) For acrylic cabin windows:

<b>Models</b>	<b>Service Bulletins</b>
SA26-T and SA26-AT	26-56-20-042, Issued: November 28, 1988, Revised: February 7, 1991
SA226-T and SA226-T(B)	226-56-001, Issued: February 2, 1983, Revised: November 26, 1991
SA226-AT and SA226-TC	226-56-002, Issued: March 3, 1983, Revised: May 29, 1992
SA227-AT, SA227-AC, and SA227-BC	227-56-002, Issued: January 5, 1984, Revised: May 29, 1992, and April 1, 1993
SA227-TT	227-56-001, Issued: February 2, 1983, Revised: November 26, 1991

(2) For acrylic cockpit side windows:

<b>Models</b>	<b>Service Bulletin</b>
SA26-T and SA26-AT	26-56-10-038, Issued: October 8, 1984, Revised: February 7, 1991
SA226-T, SA226-T(B), SA226-AT, and SA226-TC	226-56-003, Issued: September 13, 1984, Revised: November 2, 1989
SA227-AT, SA227-AC, SA227-BC, and SA227-TT	227-56-003, Issued: September 13, 1984, Revised: November 2, 1989

NOTE 3: The repetitive inspections required by this AD are also referenced in the FAA-approved Fairchild Airframe Airworthiness Limitations Manual, ST-UN-M001.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(f) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Airplane Certification Office (ACO), FAA, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Fort Worth ACO. Alternative methods of compliance approved in accordance with AD 93-19-06 (superseded by this action) are not considered approved as alternative methods of compliance with this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Fort Worth ACO.

(g) The inspections required by this AD shall be done in accordance with Fairchild Service Bulletin 26-56-20-042, Issued: November 28, 1988; Revised: February 7, 1991, Fairchild Service Bulletin 226-56-001, Issued: February 2, 1983; Revised: November 26, 1991, Fairchild Service Bulletin 227-56-001, Issued: February 2, 1983; Revised: November 26, 1991, Fairchild Service Bulletin 226-56-002, Issued: March 3, 1983; Revised: May 29, 1992, Fairchild Service Bulletin 227-56-002, Issued: January 5, 1984; Revised: May 29, 1992, and April 1, 1993, Fairchild Service Bulletin 226-56-003, Issued: September 13, 1984; Revised: November 2, 1989, Fairchild Service Bulletin 227-56-003, Issued: September 13, 1984; Revised: November 2, 1989, and Fairchild Service Bulletin 26-56-10-038, Issued: October 8, 1984; Revised: February 7, 1991, as applicable. This incorporation by reference was previously approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Fairchild Aircraft, P.O. Box 790490, San Antonio, Texas 78279-0490. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment (39-9774) supersedes AD 93-19-06, Amendment 39-8705.

(i) This amendment becomes effective on November 14, 1996.

**FOR FURTHER INFORMATION CONTACT:**

Mr. Hung Viet Nguyen, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone (817) 222-5155; facsimile (817) 222-5960.